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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/655,340

09/04/2003

Grigori Lishanski

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BOYLE FREDRICKSON S.C.
840 North Plankinton Avenue
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EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

NOTIFICATION DATE

DELIVERY MODE

05/16/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@boylefred.com

Office Action Summary	Application No. 10/655,340	Applicant(s) LISHANSKI ET AL.	
	Examiner LEONARD J. WEINSTEIN	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 31, 2008 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "the knob 36" (pg. 4 ll. 30 – should be 56), "an outlet 38" (pg. 5 ll. 3 – should be 58), "the outlet 38" (pg. 6 ll. 28 – should be 116), and "opening 52" (pg. 7 ll. 6 and ll. 7 – should be 72), as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6, 11-13, 16-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Åhs US 5,681,152. Åhs teaches all the limitations as claimed for a vibratory pump including: **[claim 1]** a housing 1, a vibration generating mechanism, as defined by element 14 driven by element 9 (heretofore referred to as 14), disposed within the housing 1, a pumping chamber, as defined by elements 2 and 8 (heretofore referred to as 2) disposed within the housing 1 adjacent the vibration generating mechanism, as defined by element 14 driven by element 9, the pumping chamber 2 including at least one fluid inlet, as defined by element 10 connected to element 2 (heretofore referred to as 10), and a fluid outlet 11 each extending through the housing 1, the at least one fluid inlet 10 adapted to be inserted into a fluid to be pumped (col. 1 ll. 61-64) to draw the fluid into the pumping chamber 2 within the housing 1, and a rod 12 disposed within the housing 1 and operably connected to the vibration generating mechanism 14 at one end and positioned within the pumping chamber 2 at the opposite end, the opposite end selectively and directly engageable with the fluid outlet 11 during operation of the vibration generating mechanism 14 (as shown figures 1-4); **[claim 2]** a fluid outlet 11 includes an outlet chamber, as defined by the space defined by elements 15 and the empty area within element 9, having an inner end, as element 15 is disposed within element 7 of

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element 1, positioned within the housing 1 and including a central opening, as defined by the empty section defined within the center of element 9, and an outer end, defined by the portion of the empty space defined by element 9 at an end face of element 9 opposite to the surface of element 9 that abuts element 8, extending outwardly from the housing 1; **[claim 3]** a central opening, as defined by the empty section defined within the center of element 9, has a conical surface, as shown with element 15''' in the embodiment of figure 7; **[claim 6]** an inner end 15 includes a resilient diaphragm 8 positioned over the central opening, as defined by the empty space defined in the center of element 9, the diaphragm 8 including a central aperture 11; **[claim 11]** at least one fluid inlet 10 includes at least one inlet tube, as shown in figure 1 as tube defined around element 10, that extends outwardly from the housing 1; **[claim 12]** at least one inlet tube, as shown in figure 1 as tube formed around element 10, is formed from a generally resilient material; **[claim 13]** at least one fluid inlet 10 includes at least one fluid opening, as defined by opening in element 2 in communication with element 10 as shown in figure 1, in the pumping chamber 2 aligned with the at least one inlet tube, as defined by the tube element formed around element 10; **[claim 14]** a housing 1 includes an engagement member, with tube element defined element 10, on the housing 1 that is capable of engaging with a fluid holding container (col. 1 ll. 61-64); **[claim 16]** and a vibration generating mechanism 14 includes a switch 9 extending through the housing 1.

Further Åhs teaches all the limitations as claimed for a vibratory pump including: **[claim 17]** a unitary housing 1, a vibration generating mechanism, as defined by element 14 driven by element 9, disposed within the housing 1, a pumping chamber 2 disposed within the housing 1 adjacent the vibration generating mechanism, as defined by element 14 driven by element 9, the pumping chamber 2 including a fluid inlet 10 and a fluid outlet 11, each extending through

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the housing 1 (as element 11 extends through housing 1 via central space defined within element 9 and also traverses an first section of the recess 7 formed in element 1), a plunger 12 operably connected to the vibration generating mechanism 14 at one end and positioned within the pumping chamber 2 at the opposite end, the opposite end selectively engageable with the fluid outlet 11 during operation of the vibration generating mechanism 14, wherein the outlet 11 end (defined by element 8) includes an outlet chamber, as defined by the space defined by elements 15 and the empty area within element 9, having an inner end 15 positioned within the housing 1 spaced from the fluid inlet 10 and including a central opening, as defined by the empty section defined within the center of element 9, and an outer end, as defined by portion of empty space defined by element 9 nearest to an end-face of element 9 opposite to an end-face abutting element 8, extending outwardly from the housing 1, and further wherein the pumping chamber 2 includes an inlet tube, as defined by the tube element defining element 10, that extends outwardly from the fluid inlet 10; **[claim 18]** and a resilient gasket 8 positioned over the central opening, as defined by the empty section defined within the center of element 9, the gasket 9 including a central aperture 11.

Further Áhs teaches all the limitations as claimed for a pumping mechanism including: **[claim 20]** an enclosure 1 having a fluid inlet 10, the fluid inlet 10 including an inlet tube, as defined by the tube element formed around element 10, extending outwardly from the enclosure 1 and adapted to be inserted into a fluid to be pumped (col. 1 ll. 61-64) to draw the fluid into the enclosure 1, and a fluid outlet 11 including an inner end 15 within the enclosure 1 and an outer end extending through the enclosure 1, and a rod 12 connectable to a vibration generating mechanism 14 and including a plate 8 disposed within the chamber 2 that is directly

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engageable with the inner end 15 of the fluid outlet 11 to selectively close the inner end 15 of fluid outlet 11 and urge the fluid out of the fluid outlet 11.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 4-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Åhs US 5,681,152 in view of Lishanski et al. US 6,428,289, as evidenced by Meyer 4, 737,083. Åhs teaches all the limitations as claimed but fails to teach the following limitations that are taught by Lishanski for a vibratory pump including: **[claims 4 and 7]** a rod 130 includes a plate 150 opposite a vibration generating mechanism 20 that is matable with a central opening 260; **[claim 5]** a plate 150 formed of a resilient material (col. 1 ll. 65- 2 ll. 2); **[claim 8]** a plate 150 is positioned within the outlet end 255; **[claim 9]** a plate 150 includes a central portion 160 having a diameter less than the diameter of a central opening 260 and an outer portion, as defined by element as defined by (D) in figure 1, having a diameter greater than the diameter of a central opening 260; **[claim 10]** and a outer portion, as defined by element (D)

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in figure 1, of a plate 150 includes a sealing member, as defined by the section of element 150 that comes into abutment with element 250 in the region where element 260 is formed, that is sealingly engageable with the inner end of a outlet chamber 210.

The plunger (element 130 and 150 combined) of Lishanski is an analogous structure for a plunger such as the one disclosed by Åhs (12). Åhs discloses the claimed invention except that a plunger for biasing a diaphragm is formed as a single rod instead of a plate attached to a rod and having a diameter greater than the rod attached as taught by Lishanski. Meyer (figure 1) shows that a plate attached to a rod and having a diameter greater than the rod attached, was an equivalent structure known in the art for plunger that biases a diaphragm. In order to rely on equivalence as a rationale supporting an obviousness-type rejection, the equivalency must be recognized in the prior art. In re Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). Meyer represents evidence that a plunger formed by the end of a single rod and a plate attached to a rod and having a greater diameter than the rod, were art-recognized equivalent structures for plungers that bias diaphragms in a pump. Therefore, because these two plunger configurations were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a plate attached to a rod and having a greater diameter than the rod for a plunger formed by the end of a single rod. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Åhs US 5,681,152 in view of Bippus US 4,154,375. Åhs teaches all the limitations as discussed but fails to teach the following limitation that is taught by Bippus for a pump including an engagement

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member 80 that is capable of engaging a fluid container 14 **[claim 15]** wherein the engagement is threaded, as defined by element 78 of 80. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a threaded engagement as taught by Bippus to a vibratory pump as taught by Åhs in order to securely connect a fluid pumping chamber to a fluid source (Bippus – col. 2 ll. 41-49).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Åhs US 5,681,152 in view of Lishanski et al. US 6,428,289, as evidenced by Meyer 4,737,083. Åhs teaches all the limitations as claimed but fails to teach the following limitations that are taught by Lishanski for a vibratory pump including: **[claims 19]** a plunger 150 includes a plate 150 opposite a vibration generating mechanism 20 that is matable with a central opening 260 in a resilient gasket 250.

The plunger (element 130 and 150 combined) of Lishanski is an analogous structure for a plunger such as the one disclosed by Åhs (12). Åhs discloses the claimed invention except that a plunger for biasing a diaphragm is formed as a single rod instead of a plate attached to a rod and having a diameter greater than the rod attached as taught by Lishanski. Meyer (figure 1) shows that a plate attached to a rod and having a diameter greater than the rod attached, was an equivalent structure known in the art for plunger that biases a diaphragm. In order to rely on equivalence as a rationale supporting an obviousness-type rejection, the equivalency must be recognized in the prior art. In re Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). Meyer represents evidence that a plunger formed by the end of a single rod and a plate attached to a rod and having a greater diameter than the rod, were art-recognized equivalent structures for plungers that bias diaphragms in a pump. Therefore, because these two plunger configurations were art-recognized equivalents at the time the invention was made, one of

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ordinary skill in the art would have found it obvious to substitute a plate attached to a rod and having a greater diameter than the rod for a plunger formed by the end of a single rod. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

Response to Arguments

10. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit
3683

/Leonard J Weinstein/
Examiner, Art Unit 3746